

# TENSILE STRENGTH RATIO (TSR) TEST WORKSHEET

## Gyratory Compactive Method

Mix Design #:

|                    |                               |                      |
|--------------------|-------------------------------|----------------------|
| Date Mix Produced: | Mix Type:                     | JMF No.:             |
| Contractor:        | Plant Location:               | Plant Cert. No.:     |
| Additive Supplier: | Additive Grade:               | Additive Dosage:     |
| Date Compacted:    | No. Gyration:      To height: | Date Test Completed: |

| SPECIMEN NUMBER                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--|---|---|---|---|---|---|---|---|
| DIAMETER(in) (a)                         |   |   |   |   |   |   |   |   |
| THICKNESS(in.) (b)                       |   |   |   |   |   |   |   |   |
| DRY MASS IN AIR (c)                      |   |   |   |   |   |   |   |   |
| SSD MASS IN AIR (d)                      |   |   |   |   |   |   |   |   |
| MASS IN WATER (e)                        |   |   |   |   |   |   |   |   |
| VOLUME (d - e) (f)                       |   |   |   |   |   |   |   |   |
| BULK SP. GR. (c ÷ f) (g)                 |   |   |   |   |   |   |   |   |
| MAX. SP. GR. (From Actual Rice Test) (h) |   |   |   |   |   |   |   |   |
| % AIR VOIDS (100 X (h - g) ÷ h) (i)      |   |   |   |   |   |   |   |   |
| VOLUME AIR VOIDS (i X f) ÷ 100 (j)       |   |   |   |   |   |   |   |   |
| PEAK LOAD (psi) (k)                      |   |   |   |   |   |   |   |   |
| DRY TS (2000 X k) ÷ (a X b X 3.1416) (l) |   |   |   |   |   |   |   |   |
| CALC SSD AT 70% SAT. (0.70 X j) + c      |   |   |   |   |   |   |   |   |
| CALC. SSD AT 80% SAT. (0.80 X j) + c     |   |   |   |   |   |   |   |   |

| SATURATED                  | MINUTES @ | "Hg |                    |  |  |  |  |  |
|----------------------------|-----------|-----|--------------------|--|--|--|--|--|
| DATE AND TIME IN:          |           |     | DATE AND TIME OUT: |  |  |  |  |  |
| SSD MASS (m)               |           |     |                    |  |  |  |  |  |
| MASS IN WATER (n)          |           |     |                    |  |  |  |  |  |
| VOLUME (m - n) (o)         |           |     |                    |  |  |  |  |  |
| VOL. ABS. H2O (m - c) (p)  |           |     |                    |  |  |  |  |  |
| % SATURATION 100 X (p ÷ j) |           |     |                    |  |  |  |  |  |

CONDITIONED 24 HOURS IN 140 DEGREE WATER

|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|
| SSD MASS (q)                                   |  |  |  |  |  |  |  |  |
| MASS IN WATER (r)                              |  |  |  |  |  |  |  |  |
| VOLUME (q - r) (s)                             |  |  |  |  |  |  |  |  |
| VOLUME ABS. H2O (q - c) (t)                    |  |  |  |  |  |  |  |  |
| % SATURATION 100 X (t ÷ j)                     |  |  |  |  |  |  |  |  |
| PEAK LOAD (Newton's) (u)                       |  |  |  |  |  |  |  |  |
| WET TS (kPa) (2000 X u) ÷ (a X b X 3.1416) (v) |  |  |  |  |  |  |  |  |
| INTERNAL SPECIMEN TEMPERATURE (°F)             |  |  |  |  |  |  |  |  |

|  |           |                  |             |           |                   |               |
|--|-----------|------------------|-------------|-----------|-------------------|---------------|
|  | Aver. VTM | Aver. Saturation | Aver. Temp. | Median TS | QA/QC Joint Test? | TESTED BY:    |
| Dry Subset                                   |           |                  |             |           | Circle One        | CERT. NO.:    |
| Wet Subset                                   |           |                  |             |           | Yes      No       | CERT. NO.:    |
| TENSILE STRENGTH RATIO                       |           |                  |             |           |                   | LAB LOCATION: |
| QA/QC COMPARATIVE TSR                        |           |                  |             |           |                   | LAB CERT NO.: |
| Visual Stripping: place x in appropriate box |           |                  |             |           |                   | Comments:     |
| None      Minor      Moderate      Severe    |           |                  |             |           |                   |               |

**Note: Attach proposed M&T 601 form when TSR specimens are being submitted to QA**